Windworks
Sailing & Powerboating

Dog House 31' Camano Troll
Reference Notes

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- These notes are intended to be used as reminders only; not as a substitute for proper training, boat check-out, and operating manual review
- Verify locations, operability of systems and equipment before departure
- Check with dock staff for updates, corrections, or questions
- DRAFT: please send updates to Margaret Pommert (contact info on Windshare)

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1) Updates

Date:	**Notice:** (Updates on vessel, including intermittent issues, new and/or vessel-specific operating procedures)	**Noted by**:
4/2/14	Port fuel tank gage inoperable	Bill
1/29/14	Horn button above doesn't work	Brian

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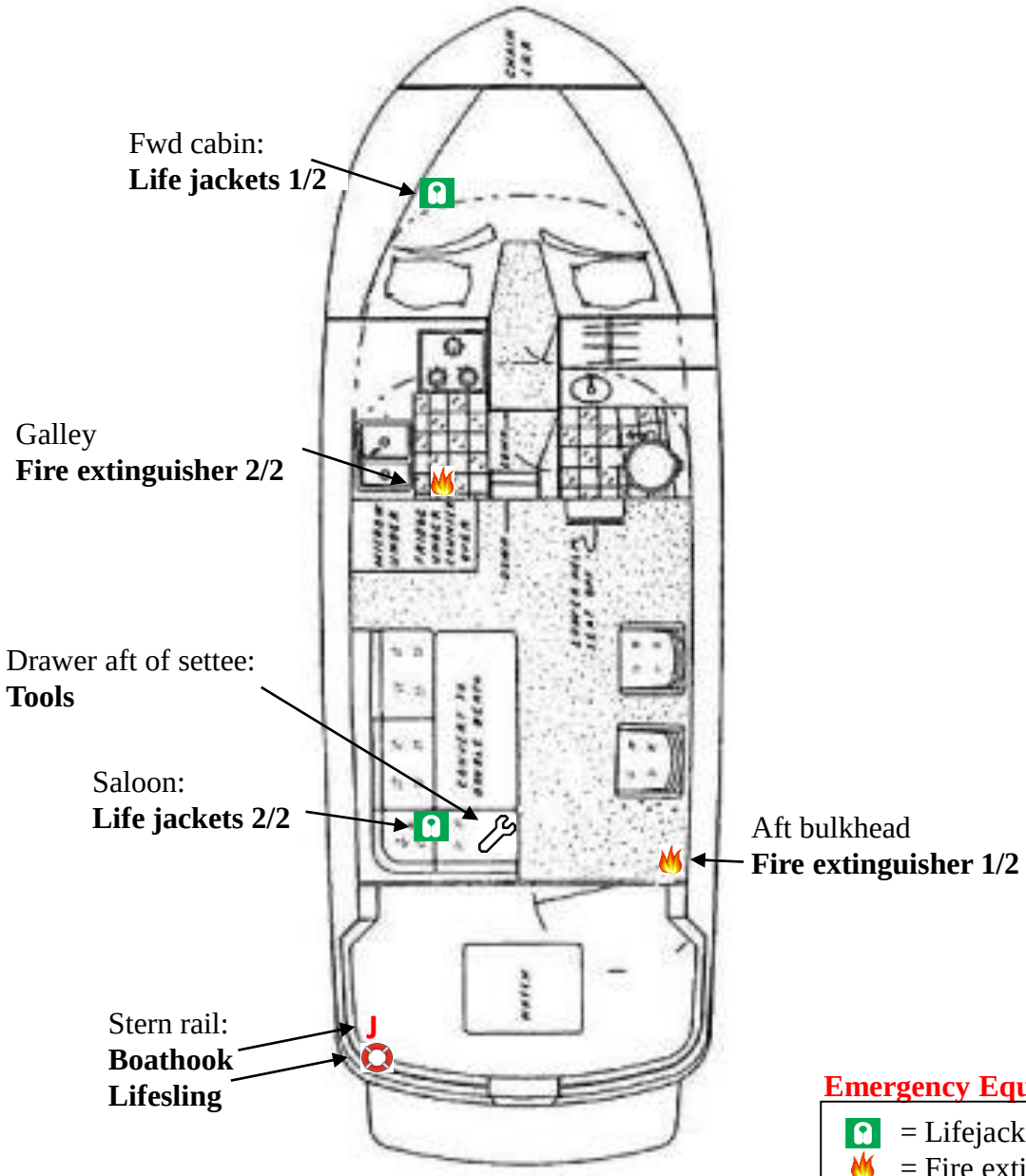
2. Emergency equipment stowage: Fire extinguishers, lifejackets, tools, etc.
(normal "Blue Bag" items not shown here)

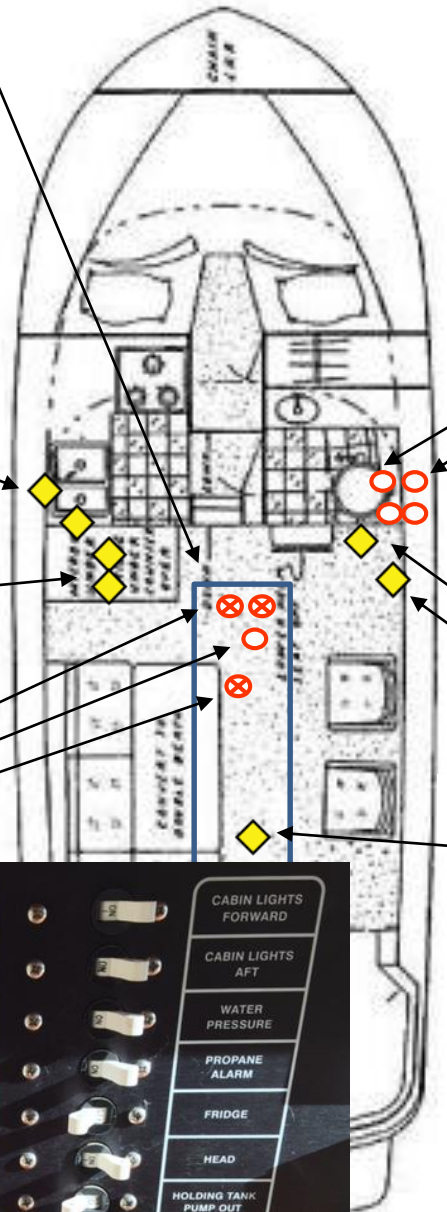


Dog House 31' Camano Troll

3a). Systems below decks: thru-hulls, valves, auto bilge pump, switches

Coolant level:

- **No overflow bottle; have to check under yellow cap on engine while cold**



Aft galley bulkhead:

- **LPG solenoid switch**
- **Inverter switch**

Salon cabinet:

- **Heater controls**
- **Generator**

Engine compartment thru-hulls:

- **Genset & A/C**
- **Transducer**
- **Raw water**

Head through-hulls (above water line):

1. **Macerator outlet**
2. **Head sink outlet**
3. **Shower sump out**
4. **Bilge out**

Helm station:

Windlass breaker & controller
House battery switch
AC/DC panel

Engine compartment, aft:

Engine battery switch (leave on all the time on this boat because hard to get to)

Below decks systems Key

Key:

⊗ = thru-hull w/seacock
○ = thru-hull w/out seacock
⋈ = valve
◆ = electrical switch
p = pump

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3b). Below decks: Boat-specific tips and procedures

Portlights in forward cabin:
Ensure closed/dogged before get underway

See "above decks for more helm info

Shutting down:
- **Use key to shut engine off**
- **Autopilot remote alarm will sound, hit 'C' button to silence it**

Key
- **Kept in drawer**

Inverter or shorepower
- **Needs to be on to use TV or Air Con.**

Fresh water head:
- **Vacuflush**
- **Reduces head smell**
- **Water pressure breaker must be on to operate**

Fresh water tanks (2; port & stbd)
- **Valves for both left open; so if not careful both could run dry**
- **Translucent; can see how full**

Raw water filters
- **Has 3; for A/C, genset, engine raw water**
- **Below water line; if need to open, close seacocks first and remember to reopen!**

Saloon table
- **Drops to convert to bunk**

Engine hatch:
Use safety straps to hold lid open (snap under table)

Engine compartment, aft:
Engine battery switch (leave on all the time per Dave)

Aft deck hatch lock:
Near base of door, inside

Leave boat with these switches on (only):
- Master breaker
- Battery charger
- Outlets (for de-humidifier)
- Bilge pump on auto

(need to validate that the info below from Cygnus is valid for Dog House as well)
Switches linked to breakers at panel bottom:
- Light in head on aft cabin breaker
- Deck light on aft cabin breaker
- Run & nav lights on navigation breaker
- Elect head on main panel breaker
- Furnace and bilge work even with battery switch off

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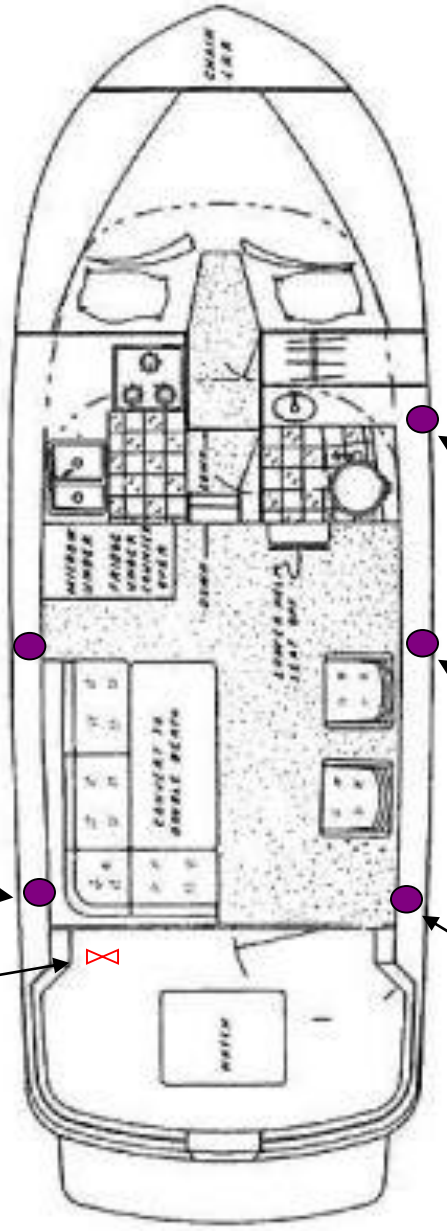
4a). Systems above decks: deck fills, switches, propane



Stbd deck fwd:
Waste pump-out

Mid port deck:
Water tank fill

Mid stbd deck:
Water tank fill

Port deck aft:
Port diesel tank fill

Stbd deck aft:
Stbd diesel tank fill

Propane locker:
Propane tank valve

Above deck systems Key

Key:
- = thru-hull w/seacock
- = thru-hull w/out seacock
- = valve
- = deck fill
- = electrical switch
- p = pump
- = exhaust outlet

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4b). Above decks. Boat-specific tips and procedures

Bow thruster:

- **Only use when boat at idle/neutral**
- **Use short bursts of 10 secs max; overheating will trip breaker (will reset itself in a few minutes)**
- **Bow thruster is always live on this boat (not on Cygnus, which will stay active for about 7 minutes, so make sure light is green)**

Transferring helm control between flybridge/cabin:

- **See p. 53 of manual**
- **Only use when boat at idle/neutral?**
- **Press and release lock key button upstairs and downstairs to switch (red light above it shows on)**

More helm info:

- **No glow plug nor throttle to start; electronic ignition**
- **Press/hold "N" button to go to neutral to when need throttle up in neutral (not needed to start)**
- **EVC center button controls elect readout in gauge above**
- **Toggle switch for gas gauge**
- **Check stop to stop turns on helm; about 5.**
- **Autohelm has rudder indicator**

Boat handling characteristics:

• Elect throttle has ½ sec delay when shift from neutral/idle to in gear (to protect against high throttle shifting)

• Throttles up quickly with very little movement of throttle lever

• 2 items above make it easy to over-power when shifting gears in close quarters! Practice just clicking into gear without any additional throttle

• Shaft drive; Moderate prop walk, to starboard

• Most economical cruising speed is around 7 KTS

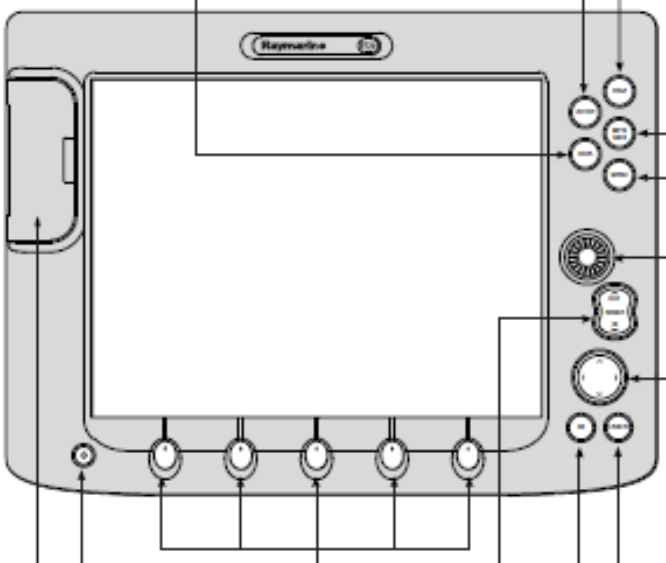
• Need transmission in gear to affect much steering

• Be aware of boat trim; how affected by amount and location of fuel, water, gear on board. If going on long trip, use fuel return valves to keep fuel tanks balanced

Fly bridge:
Load limit 6 people

General Operation
The control panel

Card No. 1



DATA
Press to access ruler, chart vectors, archive & transfer and data bar on/off functions.

ACTIVE
When multiple windows are open:
- Press to select required window.
- Press and hold to maximize current window.
- Press again to return to multiple windows.

PAGE
Press to scroll through available pages. Press and hold to select different page set or customise your own layout.

WPTS/MOB
Press to display the waypoint soft keys. Press again to place waypoint at your boat's position.
Press and hold to place a **Man Overboard (MOB)** marker at your current position. Press and hold again to exit MOB.

MENU
Press to access the set up menus. Press and hold to access help information.

Rotary control
Use to edit alpha-numeric values, and scroll through lists.
Turn clockwise to increase value and counter-clockwise to decrease value.
Press to move the cursor to the next character when editing text.
Use to edit symbology (VRM/EBL etc).

Softkeys
Press to select the corresponding function identified by the on-screen label

Trackpad
Used to control the on-screen cursor and to scroll through menu items.
Press the corresponding edge of the trackpad to move the cursor horizontally, vertically or diagonally.
Press and hold to move rapidly over larger distances.

Power
Press once to turn ON.
Press again to access backlight functions and scanner controls.
Press and hold to turn the display OFF.

CANCEL
Press to cancel the selected on-screen option when editing data; also used to return to the previous soft key set or menu.

RANGE
Press to change the display scale so that a smaller or larger area can be seen on the screen.

Chart Card slot
Open the cover to install CompactFlash cards.

OK
Press to select an on-screen option, or return to the previous set of soft keys or menu.

WARNING: NAVIGATION AID
This unit is only an aid to navigation. Its accuracy can be affected by many factors, including equipment failure or defects, environmental conditions, and improper handling or use. It is the User's responsibility to exercise common prudence and navigational judgements. This unit should not be relied upon as a substitute for such prudence and judgement.
Always keep a proper look-out.

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General Operation
Using the controls

Card No. 2

How do the controls work?

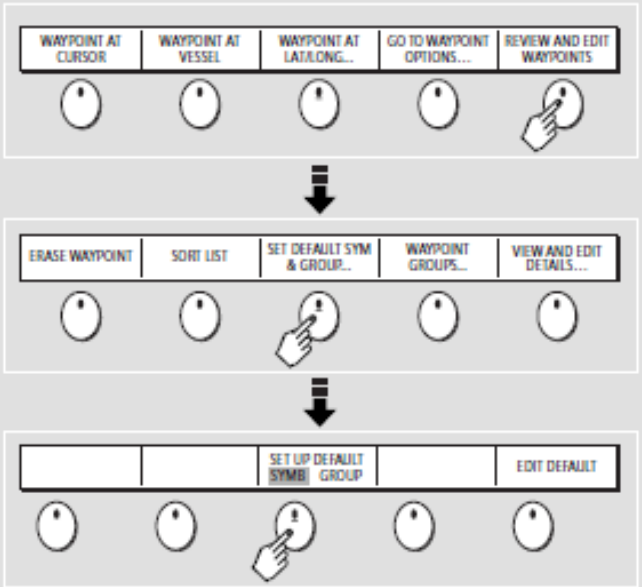
Buttons

- Access system functions or change what you see on-screen. Within the text of this document they are written in bold capitals e.g. **WPTS/MOB.**
- Press and hold to access short cuts - see individual buttons on facing page.

Example:
This example shows the series of button and soft key presses required to change the waypoint default symbol or group.

Soft keys

- They change depending on application or function being performed.
- Press and hold **MENU** to display help information for the currently displayed soft keys.
- Press the corresponding key (below the screen) to select.
- Further soft keys may be displayed. If a key has several options, each press will highlight the next option.
- If a key displays a single value or a slider above, use the rotary control to adjust.
- Within the text of this document they are written in capitals e.g. SORT LIST.



This process of pressing buttons and soft keys to navigate to the required function, is simplified within this guide and represented by a strip e.g.

The Cursor

The Cursor appears on the screen as a white cross.

To make it easier to locate on screen, the cursor changes to a circle with a cross in it, when it is moved after a 10 second period of inactivity.

The cursor is context-sensitive. When it is placed over an object e.g. a waypoint or chart feature, it changes color and a label or information associated with the object is displayed. When you place the cursor over certain items, the soft keys change to enable you to access related operations.

Simulator:

To practice using your Display without data from a GPS scanner or fishfinder, switch on the simulator via the System Setup menu.

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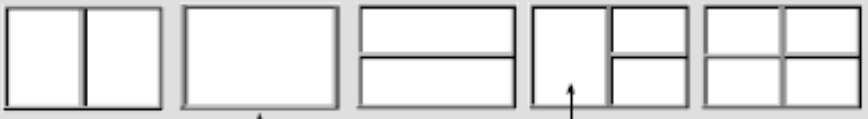
General Operation
Setting up the display

Card No. 3

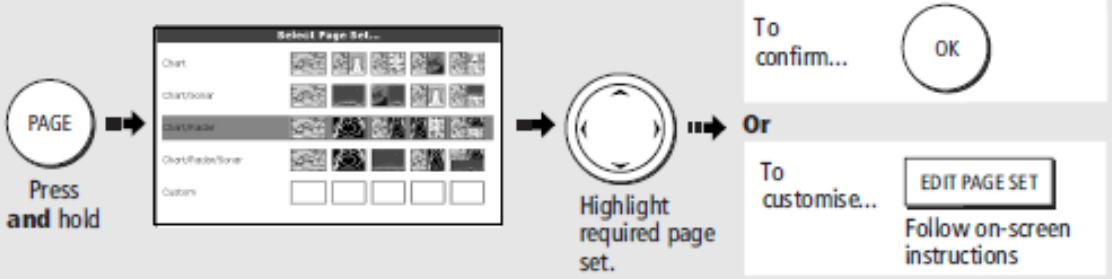
How do I select how the applications are displayed?

The applications are shown using a combination of page sets, pages and windows. There are five page sets each containing five pages with a combination of windows and applications in each. These sets can be edited to define the combination that suits your particular needs.

Any changes you make will be saved to the system. You can change these preferences as many times as you wish.



How do I select the Page Set?



Note: Alternatively you can display the Select Page Set screen via the Menu key.

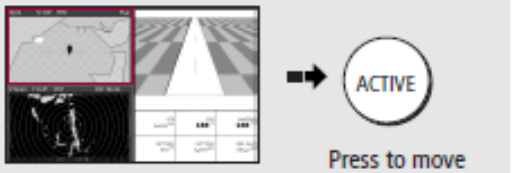
How do I select a Page?

Soft keys reflect current page set. Displayed option highlighted

Press appropriate soft key

Note: Alternatively, repeatedly press PAGE until the required page is highlighted.

How do I select a Window?



The active window is bordered in red

Press to move highlight to next window

To temporarily maximise active window:

Press **and** hold

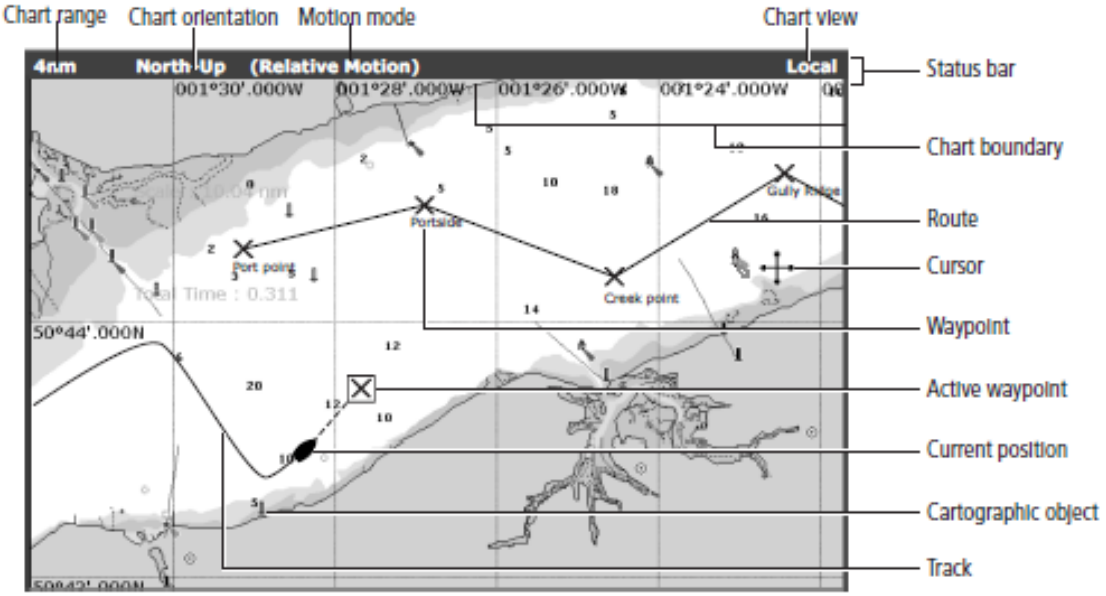
Press ACTIVE again to return to multiple windows mode.

? More information See the 'General Operation' chapter of the Reference Manual

What can I see?
Understanding the chart
Card No. 5

What can I use the chart for?

- Find where you are.
- Interpret your surroundings.
- Place waypoints at specific locations.
- Navigate to a specific point.
- Monitor where you are going.
- Record where you have been.
- Measure the distance between two points.
- Build and follow routes.
- Manage and edit routes and tracks.
- Distinguish between fixed & moving objects (radar overlay).
- View photographs of ports and marinas.
- View information normally contained in an almanac.
- Display an aerial photo overlay.



How do I move around the chart?

To change the scale:

- Press **RANGE** (OUT) to see a larger area of the chart.
- Press **RANGE** (IN) to see a smaller area in more detail.

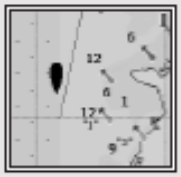
To pan the chart:

- Moves cursor. When cursor reaches window edge, chart pans to a different area.
- Press and hold to pan larger areas.

How do I find where I am on the chart?

The boat symbol indicates your position.

If you cannot find your boat symbol :

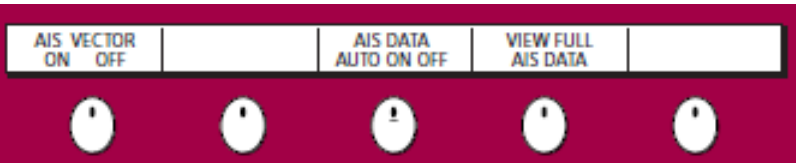


The screen automatically pans to your boat's position and re-activiates the motion mode (see below - 'How do I change how my boat moves on the chart').

? More information . . . See 'Using the Chart' chapter of the E-Series Reference Manual

What is around me?
Using AIS

Card No. 16



What is AIS?

AIS uses digital radio signals to broadcast 'realtime' information between vessels and shore based stations via dedicated VHF frequencies. This information is used to identify and track vessels in the surrounding area and to provide collision avoidance data. AIS will augment your radar application, as it can operate in radar blind spots.

In order to use the AIS feature, you will need a GPS and compass for timing and position information together with data from a suitable AIS receiver.

How do I display AIS?

On chart windows:

PRESENTATION... → CHART LAYERS... → AIS LAYER ON OFF

Toggle as required

On radar windows:

PRESENTATION... → AIS LAYER ON OFF

Toggle as required

How is AIS data displayed?

The AIS system displays other AIS equipped vessels in the surrounding area as targets overlaid on a chart or radar window. Up to 100 targets are displayed and are scaled according to the size of the vessel. A vector indicates the direction of travel of the vessel. As the vessel's status changes, the symbol for the target will change accordingly.

You can view detailed AIS data, safety critical target information, alarm messages (ALR) and safety related messages (SRM). You can also set up a safe zone.

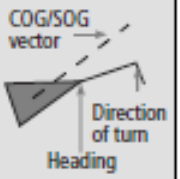
How do I view target information?

How do I view detailed AIS data?

AIS target symbols

Sleeping target
- Target not activated, dangerous or lost.

Activated target
- Target activated i.e. AIS vector displayed.
- Vector line (optional) shows predicted distance travelled within given time.



Selected target
- Target selected with cursor.
- Can activate the target and view detailed data.

Dangerous target
- Targets within specified distance (CPA) or time (TCPA).
- Dangerous target alarm sounds and target flashes.

Uncertain target
- Calculated CPA/TCPA value uncertain.

Lost target
- When signal of a dangerous AIS target not received for 10 seconds.
- Target orientated in COG or CSE direction as appropriate.
- Alarm sounds and target flashes

WARNING:

Smaller vessels do not have to be fitted with AIS and whilst it is mandatory for larger commercial vessels to carry AIS, its use is not. You should not assume that your AIS will display ALL vessels in your area.

6) Common reminders across Windworks' cruising/power fleet

Electrical

Batteries

- Monitor batteries regularly; use built in voltmeters
- Manage batteries. Windlass, 12V fridge, RADAR, inverter (for things like microwave), drain quickly
- When using windlass, run engine 1500+ RPMs in neutral (push button at bottom of throttle lever)
- Never turn battery or key off when engine running
- To charge both: Perko dial on both, 2200+ RPMs

Inverters

- Check WW boat spec sheet to see if boat has built in inverter. If not, some have 12v portable inverters on board (check…or bring your own)

(2nd) A/C breaker switches in aft lockers:

- Normally always left on. But sometimes accidently tripped when stowing gear, fenders. If there is no power at main panel for some reason: check it

Remote VHF mic for cockpit

- Power off before connecting/disconnecting

Fluxgate compass

- Know where it is when stowing gear; keep items that might affect magnetic field away

Plumbing

Water system

- Use only 1 water tank at a time (except Trolls). If pump runs 2 minutes w/out water; tank dry; shut it off. Best to keep water pressure switch off any time not using, always when leave boat.
- Water heater off when leave boat
- To heat H2O w/engine: 2200+ RPMs for ½ hr+

Tank gauges

- Readings often suspect: asymmetric tanks, reader location, sticking float (think holding tank), etc.

Head/holding tank

- If the head is suddenly hard to pump; STOP! Tank is probably full; avoid rupturing system

Power boats when on a plane

- Fuel and water collect at the back of their tanks; gauges won't read accurately. Turn off water pump to avoid it running dry in this case, and burning out

Through hulls

- Close head sink drain and/or toilet intake before sailing; heeling may cause overflow
- Always close thru hull when open raw water filter, remember to re-open before starting

Electric bilge pump

- Know how to set switch to automatic for that boat

Emergency fuel cut-off valves

- Only for emergency (e.g. fire, fuel leak)

Heating/Cooling

Diesel heaters

- Get instruction for each heater, but typically:
- Once started, will blow cool air for 10 minutes before heater lights. If heater doesn't light in that time, shut off and turn on again after a few minutes
- Once started, heater should be allowed to run/cycle at least ½ hr before shut off
- If wired through battery switch, don't turn off battery until heater turned off; needs to finish cycling
- If wired directly to battery, remember to turn off heater, otherwise will continue to run after battery switch is off
- Dangerous to run diesel heaters while crew sleeping

Exhaust outlets (engine & metal heater pipe)

- Keep dinghy, lines, fenders, etc. clear of them; risk of melting and CO forced back in cabin

Ice box/dry box/fridge (know which you have)

- Pre-cool night before; turn on and/or ice
- Drains: some don't have; melt needs sponged out
- Keep drain plugged when ice in it to keep cold air from draining out. If drains to bilge be careful not to let anything but ice melt thru it (think sour milk smell)
- Leave open to air out when empty to avoid mildew/smell. Front loading fridges usually have latch with a setting that leaves ajar and another that locks door shut

Deck General

Furling main sails

- Problems usually show up when unfurling, but created furling; should put boom 90 degrees to mast when furl, head-to-wind, slight tension on outhaul; watch as furls for issues (e.g. folds in letch) stop and fix, stop furling before sail clew wear patch (about 2')

Depth sounder

- Assume reads from water surface unless boat documents indicate otherwise

Mast height (on boat specifications)

- Is from deck, so LESS than 'bridge clearing height' (+ freeboard) unless specifically stated

Swim ladders

- Some can't be dropped from outside (think dinghy). Remember to pull up before departure

Vessel numbers

- If documented vessel boarded by USCG, they may ask to see number on boat itself

Windworks
Sailing & Powerboating

Dog House 31' Camano Troll

7.A Boat specifications (from Windworks' Website)

Specifications

Year	2007	Displacement	10,000
LOA	31'	LWL	28'
Beam	10'6"	Water Capacity	77
Draft	3'3"	Fuel Capacity	126
Mast height		HP	225
Hull Color	White		

Holding tank: 14.5 gal
Anchor rode: ??

Amenities

Cabins	1	Berths	4
Heads	1	Galley	Full
Shower	Yes	Cabin Heat	Yes
CD	Yes	TV	Yes
VCR/DVD	Yes	Stereo	Yes
Oven	Yes	Hot Water	Yes
Stove	Yes	Refrigeration	Yes
Shore Power	Yes	Stern Seat	No
Bow Thruster	Yes	Steering	Wheel
Engine	Volvo	Battery Charger	Yes
Jib		Genoa	No
Dodger	No	Jib Furling	No
Main Furling	No	Stern Shower	Yes
Inverter	Yes	Ladder	Yes
Starting Batteries	Yes	House Batteries	Yes

Instrumentation

Auto Pilot	Yes
GPS	Yes
Chart Plotter	Yes
Depth Sounder	Yes
Radar	Yes
Wind	Yes
Knot Meter	Yes
VHF	Yes

Galley info	
Stove	3 burner
Oven rack size	13" x 16"
Temp control	Thermostat
Broiler	Yes
Teakettle	Yes
Coffee	Yes
Mounted BBQ	??